REMARKS

Status of the claims

Claims 1-24 are pending. Claims 1 and 21 have been amended by this amendment. Claim 5 has been canceled by this amendment without prejudice or disclaimer. No new matter has been added by this amendment. Support for amended claims 1 and 21 can be found in Table 2, Table 6, the Sequence Listing, and pages 118-122 of the specification.

This amendment adds, changes and/or deletes claims in the instant application. A detailed listing of all claims that are, or were, in the application, irrespective of whether the claims remain under examination in the application, are presented with an appropriate defined status identifiers. See 37 C.F.R. §1.121(c).

The Restriction Requirement and Applicants' election

In the Restriction Requirement, the Examiner requested Applicants elect one of the following inventions:

Group I, Claims 1-8, and 23-24, drawn to methods for identifying an individual who has an altered risk for developing an autoimmune disease using nucleic acid based method to detect SNPs.

Group II, Claims 9-11, and 15-22, drawn to nucleic acids.

Group III, Claim 12, drawn to polypeptides.

Group IV, Claims 13-14, drawn to antibodies.

Group V, Claim 25, drawn to methods for detecting a variant polypeptide.

Group VI, Claims 26, drawn to methods for screening agents.

The Examiner also issued a further restriction requirement to all groups having more than one nucleotide or amino acid sequence. An additional restriction requirement was issued for the election a single autoimmune disease.

Applicants hereby provisionally elect, **with traverse**, to prosecute Group I, Claims 1-8, and 23-24, drawn to methods for identifying an altered risk for developing an autoimmune disease, in particular, rheumatoid arthritis, by detecting the presence of various SNPs, in particular, the polymorphism of hCV16021387, also known as rs2476601, as represented by SEQ ID NO: 36673. More information on this polymorphism can be found in Table 2, Table 6, the Sequence Listing, and in the Example section starting from page 118.

For reasons stated below, Applicants respectfully request that the Examiner reconsider and withdraw the restriction requirement, including the additional restriction requirements of the selection of just one polymorphism sequence, and one disease, for examination.

No Undue Burden Exists On the Examination Of All Groups

Under MPEP §803, for a restriction requirement to be proper, the Examiner has a serious burden to make a *prima facie* case that the following two criteria are met:

1). The inventions must be independent or distinct as claimed; **and**

2). There would be a serious burden on the examiner if restriction is not required.

Applicants respectfully submit that the Examiner has not met the burden. Applicants submit that the search and examination of claims as encompassed by the various groups is not unduly burdensome. For example, a search of the prior art to determine the novelty of the polypeptides of Group III would provide information regarding the novelty of the methods for detecting such polypeptides of Group V, and for identifying an agent of Group VI, which binds to the polypeptides.

Examination Of The Six Nucleotide Sequences Is Not Unduly Burdensome

With respect to the specific polymorphism sequence election requirement, Applicants wish to draw the Examiner's attention to MPEP §803.04, which addresses restriction requirement relating to nucleotide sequences.

The Examiner's attention is directed to MPEP §803.04. See also *Examination of Patent Applications Containing Nucleotide Sequences*, 1192 O.G. 68 (November 19, 1996). There, while recognizing that nucleotide sequences "are deemed to normally constitute independent and distinct inventions", the Director "has decided *sua sponte* to partially waive the requirements of 37 CFR §1.141 *et seq.* and permit a reasonable number of such nucleotide sequences to be claimed in a single application" in the interest "to further aid the biotechnology industry in protecting its intellectual property without creating an undue burden on the Office."

The MPEP further announces that it "has been determined that normally ten sequences constitute a reasonable number for examination purposes. Accordingly, in most cases, up to ten independent and distinct nucleotide sequences will be examined in a single application without restriction." MPEP §803.04, Eighth Edition, Revision 3, August 2005.

The MPEP provides detailed examples on the examination of nucleotide sequences in MPEP §803.04, Eighth Edition, Revision 3, August 2005. In §803.04, under the title "EXAMPLES OF NUCLEOTIDE SEQUENCE CLAIMS", the MPEP states:

> Applications claiming more than ten individual independent and distinct nucleotide sequences in alternative form, such as set forth in example (A), will be subject to a restriction requirement. **Only the ten nucleotide sequences selected in response to the restriction requirement and any other claimed sequences which are patentably indistinct therefrom will be examined.** (Emphasis added)

In addition, under the definition of Markush group, claims 1 and 23 qualify as Markush-type claims. As set forth in §803.02, Eighth Edition, Revision 3, August 2005, the MPEP states:

> If the members of the Markush group are sufficiently few in number or so closely related that a search and examination of the entire claim can be made without serious burden, the examiner must examine all the members of the Markush group in the claim on the merits, even though they may be directed to independent and distinct inventions. In such a case, the examiner will not follow the procedure described below and will not require provisional election of a single species.

There are only ten sequences in the Markush group claim at issue herein. See table below. Therefore, Applicants hereby respectfully request that the following ten nucleotide sequences in Group I be included in the examination. These six sequences, together with their public identifiers, are shown in the table below.

More detailed information about these ten sequences can be found in Table 2, the Sequence Listing, and in Table 6 as indicated below.

hCV	rs	SEQ ID NO	DATA TABLE
hCV16021387	rs2476601	36673	6
hCV9272397	rs2305480	34836	6
hCV25603489	none	30710	6
hCV7499127	rs980984	13392	6
hCV11559107	rs2626053	20612	6
hCV8915168	rs1133833	30382	6
hCV15879463	rs2275689	32827	6
hCV22273515	rs2243525	29676	6
hCV15976147	rs2304974	35519	6
hCV9692842	rs1375067	11389	6

Election of a single disease

The Office may not refuse to examine that which applicants regard as their invention. Here the diseases as listed in the claims are species of the same genus, autoimmune diseases. Under the rules announced in the MPEP relating to the examination of Markush claims, claim 8 is considered a Markush-type of claim. See §803.02, Eighth Edition, Revision 3, August 2005. For reasons stated above, applicants respectfully request the all the diseases be examined together in the instant application.

If the Examiner maintains that applicants select only one disease (rheumatoid arthritis) to prosecute, applicants would like to direct the Examiner's attention to the guideline promulgated in the MPEP relating to the election of species. The MPEP states:

> This subsection deals with Markush-type generic claims which recite a plurality of alternatively usable substances or members. In most cases, a recitation by enumeration is used because there is no appropriate or true generic language. A Markush-type claim may include independent and distinct inventions. This is true where two or more of the members are so unrelated and diverse that a prior art reference anticipating the claim with respect to one of the members would not render the claim obvious under 35 U.S.C. 103 with respect to the other member(s). In applications containing a Markush-type claim that encompasses at least two independent or distinct inventions, the examiner may require a provisional election of a single species prior to examination on the merits. An examiner should set forth a requirement for election of a single disclosed species in a Markush-type claim using form paragraph 8.01 when claims limited to species are present or using form paragraph 8.02 when no species claims are present. See MPEP § 808.01(a) and § 809.02(a). Following election, the Markush-type claim will be examined fully with respect to the elected species and further to the extent necessary to determine patentability. If the Markush-type claim is not allowable over the prior art, the provisional election will be given effect and examination will be limited to the Markush-type claim and claims to the elected species, with claims drawn to species patentably distinct from the elected species held withdrawn from further consideration.
>
> As an example, in the case of an application with a Markush-type claim drawn to the compound X-R, wherein R is a radical selected from the group consisting of A, B, C, D, and E, the examiner may require a provisional election of a single species, XA, XB, XC, XD, or XE. The Markush-type claim would then be examined fully with respect to the elected species and any species considered to be clearly unpatentable over the elected species. If on examination the elected species is found to be anticipated or rendered obvious by prior art, the Markush-type claim and claims to the elected species shall be rejected, and claims to the nonelected species would be held withdrawn from further consideration. A second action on the rejected claims can be made final unless the examiner introduces a new ground of rejection that is neither necessitated by applicant's amendment of the claims nor based on information submitted in an information disclosure statement filed during the period set forth in 37 CFR 1.97(c) with the fee set forth in 37 CFR 1.17(p). See MPEP § 706.07(a).
>
> On the other hand, should no prior art be found that anticipates or renders obvious the elected species, the search of the Markush-type claim will be extended. If prior art is then found that

anticipates or renders obvious the Markush-type claim with respect to a nonelected species, the Markush-type claim shall be rejected and claims to the nonelected species held withdrawn from further consideration.

In the event the Examiner maintains the Restriction Requirement, Applicants reserve the right to request rejoinder of any process claims limited in scope to allowable product claims in accordance with *In re Ochiai*, and further reserve the right to prosecute the subject matter of non-elected claims in subsequent divisional applications without prejudice.

The Examiner is invited to contact the undersigned via telephone if a phone interview would expedite the prosecution of the instant patent application.

Respectfully submitted,

By: _____
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Date: September 26, 2006

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